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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/785,312	02/20/2001	Franciscus Richard Blom	142-360P	1993

2292 7590 03/14/2003

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EXAMINER

BUDD, MARK OSBORNE

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 03/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

785 312

Applicant(s)

Blom

Examiner

M. Budd

Group Art Unit

2834

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1-7-03

- ☒ Responsive to communication(s) filed on \_\_\_\_\_
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 1, 3-5, 7 and 9-12 is/are pending in the application.
- ☐ Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 1, 3-5, 7 and 9-12 is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement

## Application Papers

- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some\* ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
- ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_
- ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other \_\_\_\_\_

Office Action Summary

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan (100) in view of the 'prior art' and combined with Naka.

Japan (100) teaches a piezo actuator for an ink jet printer comprising a block body, layered structures, electrode layers, ground layers and several and several inactive areas note figs. 3 and 5. Inactive areas are e.g. the extreme 'left' and 'right' ends and another near the center. The 'prior art' (applicants fig. 4) teaches separating the piezo element from the ink with a flexible plate. It is not explicitly clear whether the center inactive region of Japan (100) corresponds to the 'spine' connecting the 'fingers' of the active elements. However, the known prior art, (applicants fig. 4) clearly teach using an inactive area as the connection regions. This, obviously, would eliminate cross talk as well as eliminating inefficiency via supplying power to an inactive area of the device. The 'prior art' applicants fig. 4 has been declared as admitted prior art in applicants specification (see page 2 lines 15- page 4, line 17). Thus applicants comment that the examiner must provide evidence that the prior art predates applicants priority date is not understood. Note the piezo layer located above the uppermost electrode #40 is inactive. Thus the area below the top surface and the uppermost electrode #40 is inactive and

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lies above the active area. Japan (100) to render an area inactive via short-circuiting or providing 'dummy' electrodes is well known per se as taught by e.g. Naka and thus to use this known means to provide the inactive area in the 'prior art' would have been obvious to one of ordinary skill in the art.

Claims 4, 5, 7, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan (100) in view of 'prior art' and combined with Naka as applied to claim 1 above, and further in view of Vehara, Dibbern, or Okumura.

These claims add specific lead arrangements. Each of Uehara, Aibbern and Okumura teach that location of electrode leads in piezoelectric transducers is a matter of conveyance and expediency. As demonstrated, the leads can be brought to a single top surface (Okumura) and/or multiple side locations at the designers discretion. Such choices are a matter of obvious design options as would be apparent to one of ordinary skill in the art. The length of the piezo element relative to the ink channel is also a routine design consideration. (Note e.g. Europe (939) fig. 9).

Budd/ek

03/07/03

MARK U. BUDD  
PRIMARY EXAMINER  
ART UNIT 212